Explanation of Significant Differences
Operable Unit 3, Iron Horse Park Superfund Site

I. INTRODUCTION

A. Site Name and Location

Site Name: Operable Unit 3
Iron Horse Park

Site Location: High Street, Billerica
Middlesex County, Massachusetts

B. Lead and Support Agencies

Lead Agency: United States Environmental Protection Agency

Contact: Don McElroy, RPM
(617) 918-1326

Support Agency: Massachusetts Department of Environmental Protection (MassDEP)

Contact: Janet Waldron
(617) 556-1156

C. Legal Authority for ESD

Section 117(c) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) requires that, if any remedial or enforcement action is taken under Section 106 of CERCLA after adoption of a final remedial action plan, and such action differs in any significant respects from the final plan, the EPA shall publish an explanation of the significant differences (ESD) and the reasons such changes were made.

D. Public Record

In accordance with Section 117(d) of CERCLA, the ESD will be part of the Administrative Record File, which is available for public review at the two locations listed below at the given times:

EPA Region I Records Center
1 Congress Street
Boston, MA 02114
(617) 918-1440
Monday-Friday: 10:00am - 1:00pm
2:00pm - 5:00pm

Billerica Public Library
25 Concord Road
Billerica, MA 01821
(508) 671-0949
Monday-Thursday: 9:00am - 9:00pm
Friday-Saturday: 9:00am - 5:00pm

II. Summary of Site History, Contamination, Selected Remedy, and *Circumstances Leading to an ESD*

A. Site History

The Iron Horse Park Superfund Site (Site) consists of approximately 552 acres of land in North Billerica, near the Tewksbury town line. The Site is an active industrial complex and rail yard with a long history of activities that have resulted in contamination of soils, groundwater, and surface water. The land that makes up the Site was first purchased by the Boston & Maine Railroad, now known as Boston & Maine Corporation (B&M Corporation) in 1911. Since 1911, a variety of industrial disposal practices have resulted in the creation of numerous lagoons, landfills, and open storage areas. At various times over the years, B&M Corporation has sold or leased several parcels of the land and some of the buildings on the Site to various companies. B&M Corporation operated an oil and sludge recycling area beginning sometime prior to 1938. In 1944, B&M Corporation sold approximately 70 acres of land in the western portion of the Site to Johns-Manville Products Corporation (Johns-Manville), which at that time began to manufacture structural insulating board that contained asbestos. Three unlined lagoons were built to dispose of the

resulting asbestos sludge waste. At approximately the same time, the B&M Corporation leased approximately 15 acres of land in the eastern portion of the Site to Johns-Manville to be used as a landfill for asbestos sludge and other asbestos mill wastes generated by their manufacturing operations. EPA capped this landfill in 1984 as part of an "Immediate Removal Action" under CERCLA. The B&M Landfill, the RSI Landfill, and the B&M Locomotive Shop Disposal Areas were unmonitored landfill/disposal operations. A more complete description of the Site can be found in the Phase 1A Remedial Investigation Report (July 1987).

The Site was placed on the National Priorities List in September 1984 following investigations by the Massachusetts Department of Environmental Quality Engineering (now the Massachusetts Department of Environmental Protection or MassDEP) in the early 1980's and a Site Investigation Report completed by the NUS Corporation for EPA in August 1984. In 1985, EPA began investigations of the Site to determine the nature and extent of contamination. Under the first phase of the evaluation, EPA conducted a broad study of the Site to define the potential problem areas. This study was entitled the Phase 1A Remedial Investigation (RI). As a result of the Phase 1A RI, EPA concluded that the size and complexity of the Site necessitated using a phased approach for subsequent, more detailed studies. The areas studied and the decisions on how to clean them up were made as operable units. An operable unit (OU) is defined as a discrete portion of an entire response action that, by itself, manages migration or eliminates or mitigates a release, threat of release, or pathway of exposure.

EPA has organized the Site into four OUs. These consist of:

• OU1: EPA selected a remedy for OU1, the **B&M Wastewater Lagoons**, in a September 1988 Record of Decision (ROD). The ROD addressed contamination in an approximately 15 acre area, in and around the former wastewater lagoons. The ROD selected bioremediation to address contamination in soil and sediment. This remedy was later modified to utilize off-site asphalt batching. The remedy for OU1 was completed in 2003 with a Remedial Action (RA) Report.

• OU2: EPA selected a remedy for OU2, the **Shaffer Landfill,** in a June 1991 ROD. The ROD addressed contamination at the 60 acre former mixed waste landfill. The ROD selected capping and collection and disposal of leachate to address groundwater contamination. Construction of the remedy for OU2 was completed in 2003 with an Interim RA Report. OU2 is currently in the Operation and Maintenance phase.

• OU3: EPA selected a remedy for the **Source Control Areas of Concern** in a September 2004 ROD. The ROD addressed the remaining, previously identified source areas within the Site by utilizing source control technologies to prevent direct contact with contaminants by human and ecological receptors and to prevent the spread of contamination to groundwater and surface water. OU3 consists of seven source areas, or Areas of Concern (AOC). The AOCs consist of:

1. **B&M Railroad Landfill** - A 14 acre landfill near the commuter rail line.
2. **RSI Landfill** - A six acre landfill adjacent to the rail yard.
3. **B&M Locomotive Shop Disposal Areas** - Two disposal areas which total approximately 1 and 3 acres in area, separated by a man-made channel.
4. **Old B&M Oil/Sludge Recycling Area** - Approximate six acre area established sometime prior to 1938 for the purpose of recycling oil.
5. **Contaminated Soils Area** - Approximate 50 acre area is located in the center of the Site.
6. **Asbestos Landfill** - Previously utilized by Johns-Manville for disposal of asbestos-related materials; 13-acre landfill capped by EPA in 1984 as part of a removal action.
7. **Asbestos Lagoons** - Three unlined former asbestos lagoons which received asbestos slurry pumped from the adjacent manufacturing operation. Asbestos from these lagoons was disposed of in the Asbestos Landfill.

The **Asbestos Lagoons AOC**, also referred to as AOC 7, is the subject of this ESD.

• OU4: OU4 consists of site-wide surface water, sediment and groundwater. In addition, the potential risk posed site-wide by residual asbestos will be investigated and addressed as part of OU4.

B. Contamination Problems

AOC 7, the Asbestos Lagoons, consists of three unlined asbestos lagoons on property formerly owned by Johns-Manville and currently owned by BNZ Materials, Inc. One of these lagoons has been filled and covered. When the lagoons were operated by Johns-Manville, they received an asbestos slurry pumped from the adjacent manufacturing operations. Asbestos from these lagoons was disposed of in the Asbestos Landfill;

however, the lagoons still contain some asbestos, as well as other wastes. The lagoons continued to receive wastewater from Johns-Manville operations after asbestos manufacturing operations closed. During the Remedial Investigation, xylenes, toluene, manganese and other contaminants were detected in Asbestos Lagoons sediments.

C. Summary of Remedy Originally Described in the Record of Decision

The conceptual remedy for AOC 7, the Asbestos Lagoons, described in the ROD consists of construction of a landfill cap. Construction will be accomplished by:

1 - ***capping lagoon material;***

2 - ***erecting a fence around the capped material;***

3 - ***instituting land use restrictions;***

4 - ***inspecting & maintaining the cap & fence on a periodic basis to ensure that it remains effective;***

5 - ***sampling groundwater periodically to assess the effects of the source control action (capping)& any ongoing impacts from the landfill. Installing, if necessary, new monitoring wells.***

D. Summary of Circumstances That Gave Rise to the Need for an ESD

Section 121(d) of CERCLA requires that on-site remedial actions must at least attain Federal and more stringent State applicable or relevant and appropriate requirements (ARARs) upon completion of the remedial action. EPA must identify if an ARAR is applicable to the remedial action based upon an objective determination of whether the requirement specifically addresses a hazardous substance, pollutant or contaminant (chemical-specific), remedial action (action-specific), location (location-specific) or other circumstance.[2] If a requirement is not applicable, it may still be relevant and appropriate if EPA determines, after evaluating certain factors, that the requirement addresses problems or situations sufficiently similar to the circumstances of the remedial action and is well-suited to the Site. [3]

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[2] 40 CFR § 300.400(g)(1)
[3] 40 CFR § 300.400(g)(2).

Section M of the ROD summarizes how the selected remedy for OU3 will satisfy statutory requirements and states that the selected remedy will comply with ARARs, as required by Section 121(d) of CERCLA. The Toxic Substances Control Act (TSCA) is listed as an ARAR for AOC 7 and is designated as an applicable requirement. [4]

During remedial design for AOC 7, EPA discovered that the TSCA regulations had been erroneously cited in the ROD as an ARAR for the remedial action at AOC 7. EPA is issuing this ESD in order to clarify that TSCA is not an ARAR with respect to the remedial action at AOC 7 of the Site.

III. Description of Significant Differences and the Basis for these Differences

A. Significant Differences

The OU3 ROD and Table L-14 cite a provision of the TSCA regulations as an ARAR which is applicable to the remedial action at AOC 7 of the Site.

The significant difference from the OU3 ROD is that EPA has determined that this provision of the TSCA regulations is not an ARAR for the remedial action at AOC 7 of the Site. A revised Table L-14 is attached to this ESD and will be placed in the Administrative Record for the Site.

B. Basis for Change

The TSCA provision cited, Appendix D to Subpart E of 40 CFR Part 763 (TSCA provision), is not applicable as an action-specific ARAR for the selected remedy at AOC 7. The remedial action selected for AOC 7 of OU3 involves capping lagoon material, erecting a fence around the capped material, instituting land use restrictions, inspecting and monitoring the cap and fence on a periodic basis to ensure that it remains effective and sampling groundwater periodically to assess the effects of the source control action. The TSCA provision addresses the transportation and disposal of asbestos waste. Because the asbestos waste at AOC 7 of the Site is being capped in place, neither transportation nor disposal of asbestos waste is occurring under this ROD. Thus, the TSCA provision does not specifically address the remedial action at AOC

[4] Specifically, Table L-14 of the ROD for OU3 lists, among other citations under "Action Specific ARARs, Federal Regulatory Requirements," the "Toxic Substances Control Act (TSCA)- Transport and Disposal of Asbestos Waste (40 CFR 763, Subpart E, Appendix D)." The entry in Table L-14 under "Action to be taken to attain ARAR" states that "these standards for managing asbestos and capping the area will be met."

7 of the Site and is not an applicable requirement under CERCLA.

The TSCA provision is also not a relevant and appropriate action-specific ARAR for the selected remedy at AOC 7. As noted above, the purpose of the TSCA provision and the actions or activities regulated by the TSCA provision are different from those that will be implemented in the remedial action at AOC 7.[5] In addition, the type of location regulated by the requirement differs from the location of AOC 7.[6] Specifically, Subpart E of the TSCA regulations applies to the management of asbestos in schools.[7] In contrast, AOC 7 is located in an active industrial park and the remedial action addresses asbestos lagoons created by a commercial manufacturing process.[8] In contrast to an educational setting, AOC 7 is located next to an active manufacturing facility and is surrounded by a variety of industries, including an active rail yard. Institutional controls implemented after completion of the remedial action will prohibit the use of the property for educational and other purposes.

IV. Supporting Agency Comments

In a letter to EPA dated May 8, 2009, MassDEP expressed its agreement with the modification to the ARARs for the Selected Remedy documented in this ESD.

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[5] 40 CFR § 300.400(g)(2)(i),(iv).

[6] 40 CFR § 300.400(g)(2)(vi).

[7] "This rule requires local education agencies to identify friable and nonfriable asbestos-containing material (ACM) in public and private elementary and secondary schools by visually inspecting school buildings for such materials, sampling such materials if they are not assumed to be ACM, and having samples analyzed by appropriate techniques referred to in this rule. The rule requires local education agencies to submit management plans to the Governor of their State by October 12, 1988, begin to implement the plans by July 9, 1989, and complete implementation of the plans in a timely fashion. In addition, local education agencies are required to use persons who have been accredited to conduct inspections, reinspections, develop management plans, or perform response actions. The rule also includes recordkeeping requirements. Local education agencies may contractually delegate their duties under this rule, but they remain responsible for the proper performance of those duties. Local education agencies are encouraged to consult with EPA Regional Asbestos Coordinators, or if applicable, a State's lead agency designated by the State Governor, for assistance in complying with this rule." 40 CFR § 763.80 (a).

[8] Appendix D to Subpart E is essentially a reprinting of EPA guidance for local education agencies. "Local education agencies must provide for the transportation and disposal of asbestos in accordance with EPA's "Asbestos Waste Management Guidance." For convenience, applicable sections of this guidance are reprinted as Appendix D of this subpart. There are regulations in place, however, that affect transportation and disposal of asbestos waste generated by this rule. The transportation of asbestos waste is covered by the Department of Transportation (49 CFR part 173, subpart J) and disposal is covered by the National Emissions Standards for Hazardous Air Pollutants (NESHAP) (40 CFR part 61, subpart M)." 40 CFR § 763.80 (b).

V. Statutory Determinations

This ESD documents EPA's modification of the ROD to eliminate an ARAR that was cited in error.

EPA believes that the remedy remains protective of human health and the environment, complies with all Federal and State requirements that are applicable or relevant and appropriate to this remedial action, and is cost-effective. In addition, the remedy utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable for this Site.

VI. Public Participation Activities

EPA will publish notice of availability of this ESD in a local newspaper (Lowell Sun).

James T. Owens, III, Director
Office of Site Remediation and Restoration
EPA-New England

6/19/09
Date

TABLE L-14. ARARS, CRITERIA, ADVISORIES, AND GUIDANCE FOR THE ASBESTOS LAGOONS

Alternative	ARAR, Media and Authority	Requirements	Status	Triggering Action & Requirement Synopsis	Action to be taken to attain ARAR
No Action					
	Chemical Specific	YES			
	Federal Regulatory Requirements	Clarifying Cleanup Goals and Identification of New Assessment Tools for Evaluating Asbestos at Superfund Cleanups	To be Considered	EPA guidance on developing cleanup goals for asbestos.	This alternative will not meet this standard since risks from asbestos not addressed.
	Federal Regulatory Requirements	Cancer Slope Factors (CSF).	To Be Considered	Guidance used to compute the individual incremental cancer risk resulting from exposure to carcinogenic contaminants in site media.	This alternative will not meet this standard since potential carcinogenic hazards caused by exposure to contaminants not addressed.
	Federal Regulatory Requirements	Reference Dose (RfD)	To Be Considered	Guidance used to characterize human health risks due to non-carcinogens in site media.	This alternative will not meet this standard since potential non-carcinogenic hazards caused by exposure to contaminants not addressed.
	Location Specific	NO			
	Action Specific	NO			

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Alternative	ARAR, Media and Authority	Requirements	Status	Triggering Action & Requirement Synopsis	Action to be taken to attain ARAR
Limited Action: Institutional Controls					
	Chemical Specific	YES			
	Federal Regulatory Requirements	Clarifying Cleanup Goals and Identification of New Assessment Tools for Evaluating Asbestos at Superfund Cleanups	To be Considered	EPA guidance on developing cleanup goals for asbestos.	This alternative will partially meet this standard since risks from asbestos will be reduced by preventing access to the Site. However, migration of asbestos from the Site will not be prevented.
	Federal Regulatory Requirements	Cancer Slope Factors (CSF).	To Be Considered	Guidance used to compute the individual incremental cancer risk resulting from exposure to carcinogenic contaminants in site media.	This alternative will not meet this standard since potential carcinogenic hazards caused by migration of contaminants into groundwater will not be addressed through institutional controls.
	Federal Regulatory Requirements	Reference Dose (RfD)	To Be Considered	Guidance used to characterize human health risks due to non-carcinogens in site media.	This alternative will not meet this standard since potential carcinogenic hazards caused by migration of contaminants into groundwater will not be addressed through institutional controls.
	Location Specific	YES			
	Massachusetts Regulatory Requirements	Wetlands Protection Act (Mass. Gen. Laws ch. 131, §40); Wetlands Protection Regulations (310 CMR §10.00)	Applicable	This alternative includes work to be performed in or near a wetland. Sets performance standards for dredging, filling, altering of inland wetlands and within 100 feet of a wetland. The requirement also defines wetlands based on vegetation type and requires that effects on wetlands be mitigated. Resource areas at the site covered by the regulations include banks, bordering vegetated wetlands, land under bodies of water, land subject to flooding, riverfront, and estimated habitats of rare wildlife.	If new monitoring wells are needed, and no practical alternative to locating in wetlands or regulated buffer zones, then measures will be taken to minimize impacts.

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Alternative	ARAR, Media and Authority	Requirements	Status	Triggering Action & Requirement Synopsis	Action to be taken to attain ARAR
	Action Specific	YES			
	Federal Regulatory Requirements	Clean Air Act - National Emission Standard for Asbestos, Subpart M (40 CFR Part 61.150, 61.151)	Applicable	This alternative includes remedial actions of areas containing asbestos. Provides standards for packaging, transport and disposal of materials that contain asbestos. Disposal requirements for asbestos disposal sites are established. Advance EPA notification of the intended disposal site is required.	These standards will not be met because institutional controls alone won't meet disposal requirements for leaving asbestos in the lagoons in place.
	Federal Regulatory Requirements	RCRA Subtitle C- Hazardous Waste Identification and Listing Regulations; Generator and Handler Requirements (40 CFR Parts 260-262 and 264)	Applicable	These rules are used to identify, manage, and dispose of hazardous waste.	Any media generated as part of monitoring activities will be tested for hazardous waste characteristics. If determined to be hazardous waste, then they will be stored, transported, and disposed off site in accordance with these standards.
	Massachusetts Regulatory Requirements	Management Standards for all Hazardous Waste Facilities (310 CMR 30.500); Waste Analysis (310 CMR 30.513); Management Standards (310 CMR 510)	Applicable	These rules are used to identify, manage, and dispose of hazardous waste.	Any media generated as part of monitoring activities will be tested for hazardous waste characteristics. If determined to be hazardous waste, then they will be stored, transported, and disposed off site in accordance with these standards.
	Massachusetts Regulatory Requirements	Mass Solid Waste Management Regulations (310 CMR 19.00)	Applicable for disposal standards; Relevant and Appropriate for Closure/Post Closure Standards	These regulations address management and disposal of non-hazardous waste, closure, post-closure, and maintenance of solid waste landfills.	Any media generated as part of monitoring activities that is determined to be non-hazardous would be managed and disposed of in accordance with these standards. However this Alternative will not meet the closure/post closure standards because institutional controls alone will not address requirements to prevent migration of contaminants to surface and groundwater.
	Massachusetts Regulatory Requirements	Massachusetts DEP Landfill Technical Guidance Manual	To be Considered	Provides a standard reference for and guidance on landfill design, construction and QA/QC procedures in accordance with 310 CMR 19.00	These standards will not be met because institutional controls alone will not address landfill design requirements.

TABLE L-14. ARARS, CRITERIA, ADVISORIES, AND GUIDANCE FOR THE ASBESTOS LAGOONS

Alternative	ARAR, Media and Authority	Requirements	Status	Triggering Action & Requirement Synopsis	Action to be taken to attain ARAR
	Massachusetts Regulatory Requirements	Massachusetts Air Pollution Control Regulations (310 CMR 7.15)	Relevant and Appropriate	This alternative includes excavation and/or earthwork of asbestos-contaminated areas. Provides standards for demolition and renovation of facilities or facility components that contain asbestos. Requires notice to the DEP of work to be done. Specifies procedures to prevent and control asbestos emissions. Identifies waste disposal requirements.	These standards will not be met because institutional controls alone won't meet disposal requirements for leaving asbestos in the lagoons in place.

TABLE L-14. ARARS, CRITERIA, ADVISORIES, AND GUIDANCE FOR THE ASBESTOS LAGOONS

Alternative	ARAR, Media and Authority	Requirements	Status	Triggering Action & Requirement Synopsis	Action to be taken to attain ARAR
Excavate and Place Under Another On-Site AOC Cap					
	Chemical Specific	YES			
	Federal Regulatory Requirements	Clarifying Cleanup Goals and Identification of New Assessment Tools for Evaluating Asbestos at Superfund Cleanups	To be Considered	EPA guidance on developing cleanup goals for asbestos.	This alternative will meet this standard by removing asbestos and putting it under a cap at another AOC where it will be properly managed and monitored.
	Federal Regulatory Requirements	Cancer Slope Factors (CSF).	To Be Considered	Guidance used to compute the individual incremental cancer risk resulting from exposure to carcinogenic contaminants in site media.	This alternative will meet this standard by removing potential carcinogenic hazards and putting it under a cap at another AOC where it will be properly managed and monitored.
	Federal Regulatory Requirements	Reference Dose (RfD)	To Be Considered	Guidance used to characterize human health risks due to non-carcinogens in site media.	This alternative will meet this standard by removing potential non-carcinogenic hazards and putting it under a cap at another AOC where it will be properly managed and monitored.
	Location Specific	YES			
	Massachusetts Regulatory Requirements	Wetlands Protection Act (Mass. Gen. Laws ch. 131, §40); Wetlands Protection Regulations (310 CMR §10.00)	Applicable	This alternative includes work to be performed within 100 feet of a defined wetland. Sets performance standards for dredging, filling, altering of inland wetlands and within 100 feet of a wetland. The requirement also defines wetlands based on vegetation type and requires that effects on wetlands be mitigated. Resource areas at the site covered by the regulations include banks, bordering vegetated wetlands, land under bodies of water, land subject to flooding, riverfront, and estimated habitats of rare wildlife.	If excavation activities occur within regulated buffer zones, then measures will be taken to minimize impacts.

TABLE L-14. ARARS, CRITERIA, ADVISORIES, AND GUIDANCE FOR THE ASBESTOS LAGOONS

Alternative	ARAR, Media and Authority	Requirements	Status	Triggering Action & Requirement Synopsis	Action to be taken to attain ARAR
	Action Specific	YES			
	Federal Regulatory Requirements	Clean Air Act - National Emission Standard for Asbestos, Subpart M (40 CFR Part 61.150, 61.151)	Applicable	This alternative includes remedial actions of areas containing asbestos. Provides standards for packaging, transport and disposal of materials that contain asbestos. Disposal requirements for asbestos disposal sites are established. Advance EPA notification of the intended disposal site is required.	Any media generated as part of excavation activities will be tested for hazardous waste characteristics. If determined to be hazardous waste, then they will be stored, transported, and disposed off site in accordance with these standards.
	Federal Regulatory Requirements	RCRA Subtitle C- Hazardous Waste Identification and Listing Regulations; Generator and Handler Requirements (40 CFR Parts 260-262 and 264)	Applicable	These rules are used to identify, manage, and dispose of hazardous waste.	Any media generated as part of excavation activities will be tested for hazardous waste characteristics. If determined to be hazardous waste, then they will be stored, transported, and disposed off site in accordance with these standards.
	Massachusetts Regulatory Requirements	Management Standards for all Hazardous Waste Facilities (310 CMR 30.500); Waste Analysis (310 CMR 30.513); Management Standards (310 CMR 510)	Applicable	These rules are used to identify, manage, and dispose of hazardous waste.	These standards will be complied with as relevant and appropriate to any disturbance of asbestos-containing materials handled at the Site.
	Massachusetts Regulatory Requirements	Massachusetts Air Pollution Control Regulations (310 CMR 7.15)	Relevant and Appropriate	This alternative includes excavation and/or earthwork of asbestos-contaminated areas. Provides standards for demolition and renovation of facilities or facility components that contain asbestos. Requires notice to the DEP of work to be done. Specifies procedures to prevent and control asbestos emissions. Identifies waste disposal requirements.	Any media generated as part of excavation activities that is determined to be non-hazardous would be managed and disposed of in accordance with these standards. This Alternative will meet the closure/post closure standards by removing all non-hazardous waste from the Site.
	Massachusetts Regulatory Requirements	Mass Solid Waste Management Regulations (310 CMR 19.00)	Applicable for disposal standards; Relevant and Appropriate for Closure/Post Closure Standards	These regulations address management and disposal of non-hazardous waste, closure, post-closure, and maintenance of solid waste landfills.	

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Alternative	ARAR, Media and Authority	Requirements	Status	Triggering Action & Requirement Synopsis	Action to be taken to attain ARAR
Cap Waste					
	Chemical Specific	YES			This alternative will meet this standard by capping the asbestos and maintaining and monitoring the cap
	Federal Regulatory Requirements	Clarifying Cleanup Goals and Identification of New Assessment Tools for Evaluating Asbestos at Superfund Cleanups	To be Considered	EPA guidance on developing cleanup goals for asbestos.	This alternative will meet this standard by capping potential carcinogenic hazards and maintaining and monitoring the cap.
	Federal Regulatory Requirements	Cancer Slope Factors (CSF).	To Be Considered	Guidance used to compute the individual incremental cancer risk resulting from exposure to carcinogenic contaminants in site media.	This alternative will meet this standard by capping potential non-carcinogenic hazards and maintaining and monitoring the cap.
	Federal Regulatory Requirements	Reference Dose (RfD)	To Be Considered	Guidance used to characterize human health risks due to non-carcinogens in site media.	
	Location Specific	YES			If excavation and capping activities occur within regulated buffer zones, then measures will be taken to minimize impacts.
	Massachusetts Regulatory Requirements	Wetlands Protection Act (Mass. Gen. Laws ch. 131, §40); Wetlands Protection Regulations (310 CMR §10.00)	Applicable	This alternative includes work to be performed within 100 feet of a defined wetland. Sets performance standards for dredging, filling, altering of inland wetlands and within 100 feet of a wetland. The requirement also defines wetlands based on vegetation type and requires that effects on wetlands be mitigated. Resource areas at the site covered by the regulations include banks, bordering vegetated wetlands, land under bodies of water, land subject to flooding, riverfront, and estimated habitats of rare wildlife.	

TABLE L-14. ARARS, CRITERIA, ADVISORIES, AND GUIDANCE FOR THE ASBESTOS LAGOONS

Alternative	ARAR, Media and Authority	Requirements	Status	Triggering Action & Requirement Synopsis	Action to be taken to attain ARAR
	Action Specific	YES			These standards for managing asbestos and capping the area will be met.
	Federal Regulatory Requirements	Clean Air Act - National Emission Standard for Asbestos, Subpart M (40 CFR Part 61.150, 61.151)	Applicable	This alternative includes remedial actions of areas containing asbestos. Provides standards for packaging, transport and disposal of materials that contain asbestos. Disposal requirements for asbestos disposal sites are established. Advance EPA notification of the intended disposal site is required.	Any media generated as part of monitoring activities will be tested for hazardous waste characteristics. If determined to be hazardous waste, then they will be stored, transported, and disposed off site in accordance with these standards.
	Federal Regulatory Requirements	RCRA Subtitle C- Hazardous Waste Identification and Listing Regulations; Generator and Handler Requirements (40 CFR Parts 260-262 and 264)	Applicable	These rules are used to identify, manage, and dispose of hazardous waste.	Any media generated as part of monitoring activities will be tested for hazardous waste characteristics. If determined to be hazardous waste, then they will be stored, transported, and disposed off site in accordance with these standards.
	Massachusetts Regulatory Requirements	Management Standards for all Hazardous Waste Facilities (310 CMR 30.500), Waste Analysis (310 CMR 30.513); Management Standards (310 CMR 510)	Applicable	These rules are used to identify, manage, and dispose of hazardous waste.	Any media generated as part of monitoring activities that is determined to be non-hazardous would be managed and disposed off site in accordance with these standards. This Alternative will be meet the closure/post closure standards to prevent human contact and migration of contaminants to surface and groundwater.
	Massachusetts Regulatory Requirements	Mass Solid Waste Management Regulations (310 CMR 19.00)	Applicable for disposal standards; Relevant and Appropriate for Closure/Post Closure Standards	These regulations address management and disposal of non-hazardous waste, closure, post-closure, and maintenance of solid waste landfills.	This Alternative will be meet the landfill design standards to prevent human contact and migration of contaminants to surface and groundwater.
	Massachusetts Regulatory Requirements	Massachusetts DEP Landfill Technical Guidance Manual	To be Considered	Provides a standard reference for and guidance on landfill design, construction and QA/QC procedures in accordance with 310 CMR 19.00	These standards will be complied with as relevant and appropriate to any disturbance of asbestos-containing materials handled at the Site.

TABLE L-14. ARARS, CRITERIA, ADVISORIES, AND GUIDANCE FOR THE ASBESTOS LAGOONS

Alternative	ARAR, Media and Authority	Requirements	Status	Triggering Action & Requirement Synopsis	Action to be taken to attain ARAR
	Massachusetts Regulatory Requirements	Massachusetts Air Pollution Control Regulations (310 CMR 7.15)	Relevant and Appropriate	This alternative includes excavation and/or earthwork of asbestos-contaminated areas. Provides standards for demolition and renovation of facilities or facility components that contain asbestos. Requires notice to the DEP of work to be done. Specifies procedures to prevent and control asbestos emissions. Identifies waste disposal requirements.	